IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
Inventor: Jeffrey J, Jonas et al.	)	Examiner: Fikremariam A. Yalew
Serial No.: 10/807,826	)	Group Art Unit: 2436
Filed: March 24, 2004	)	Appeal No.: _________
Title: SECURE COORDINATE IDENTIFICATION METHOD, SYSTEM AND PROGRAM	)	

BRIEF OF APPELLANTS

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 CFR §41.37, Appellants' attorney hereby submits the Brief of Appellants on appeal from the final rejection in the above-identified application, as set forth in the Office Action dated June 28, 2010.

Please charge the amount of $540.00 to cover the required fee for filing this Brief of Appellants as set forth under 37 C.F.R. §41.37(a) (2) and 37 C.F.R. §41.20(b) (2) to Deposit Account 09-0460 of I.B.M. Corporation, the assignee of the present invention. In addition, the Office is authorized to charge any necessary fees or credit any overpayments to Deposit Account No. 09-0460.

I. REAL PARTY IN INTEREST

The real party in interest is I.B.M. Corporation, the assignee of the present application.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for the above-referenced patent application.

III. STATUS OF CLAIMS

Claims 1-30 are pending in the application.

Claims 1-7, 10-13, 16-22, and 25-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller).

Claims 14-15 and 29-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller) and further more in view of Denning et al., U.S. Patent No. 7,143,289 (Denning).

Claims 8-9 and 23-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller) and further more in view of Clapper, U.S. Publication No. 2003/0108202 (Clapper).

Claims 1-30 are being appealed.

IV. STATUS OF AMENDMENTS

No amendments have been submitted subsequent to the mailing of the Office Action dated June 28, 2010.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter can be found in the Appellants' specification as filed as described below:

Claim Elements	**Support in Specification**
1. A computer-implemented method for identification, processing, and comparison of location coordinate data in a confidential and anonymous manner, comprising:	Paragraph 3; and Paragraphs 9 and 10 referring to 10 and 12 in FIG. 1.
receiving, in a computer, a plurality of fixed	Paragraph 13 referring to 18 and 20 in FIG. 2.

Claim Elements	Support in Specification
coordinates, each of the fixed coordinates representing a location of an item, and the plurality of fixed coordinates being generated by more than one process;	
utilizing, in the computer, a cryptographic algorithm to encrypt the plurality of fixed coordinates, thereby forming a processed data; and	Paragraph 19 referring to 22 in FIG. 2.
comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.	Paragraph 19 referring to 24 in FIG. 2.
2. The method of claim 1 further comprising the step of receiving data representing the location of the item and determining the plurality of fixed coordinates that represent the location of the item prior to receiving the plurality of fixed coordinates.	Paragraphs 13 through 18 referring to 18 and 20 in FIG. 2 and 30 in FIG. 3.
3. The method of claim 1 further comprising the step of storing the processed data in a database.	Paragraph 20 referring to 26 in FIG. 2.

Claim Elements	Support in Specification
4. The method of claim 1 wherein the step of comparing the processed data to at least a portion of secondary data includes the secondary data comprising data previously stored in a database.	Paragraph 19 referring to 24 in FIG. 2.
5. The method of claim 1 further comprising the step of matching the processed data to the at least a portion of secondary data that is determined to reflect an identical one of the plurality of fixed coordinates.	Paragraph 19 referring to 24 in FIG. 2.
6. The method of claim 1 further comprising the step of issuing a signal based upon a user-defined rule.	Paragraph 20 referring to 28 in FIG. 2.
7. The method of claim 1 wherein the step of determining the plurality of fixed coordinates that represent the location occurs in relation to a grid.	Paragraph 13 referring to 20 in FIG. 2.
8. The method of claim 7 wherein the grid comprises a uniform grid.	Paragraph 13 referring to 20 in FIG. 2.
9. The method of claim 7 wherein the grid comprises a non-uniform grid.	Paragraph 13 referring to 20 in FIG. 2.
10. The method of claim 7 wherein the grid is a multi-dimensional grid.	Paragraph 13 referring to 20 in FIG. 2.

Claim Elements	Support in Specification
11. The method of claim 7 wherein the grid is based upon a user-defined criterion.	Paragraph 14.
12. The method of claim 11 wherein the user-defined criterion corresponds with quantity.	Paragraph 14.
13. The method of claim 11 wherein the user-defined criterion corresponds to time.	Paragraph 14.
14. The method of claim 1 wherein the step of determining the plurality of fixed coordinates that represent the location includes the step of determining a nearest of the plurality of fixed coordinates.	Paragraph 14.
15. The method of claim 1 wherein the step of determining a plurality of fixed coordinates that represent the location includes the step of determining the plurality of fixed coordinates surrounding the location.	Paragraph 14.
16. For a computer-implemented system for identification, processing, and comparison of location coordinate data in a confidential and anonymous manner, and a computer readable medium containing program instructions for execution by a computer for performing the method, comprising:	Paragraph 3; and Paragraphs 9 and 10 referring to 10 and 12 in FIG. 1.

Claim Elements	Support in Specification
receiving, in a computer, a plurality of fixed coordinates, each of the fixed coordinates representing a location of an item, and the plurality of fixed coordinates being generated by more than one process;	Paragraph 13 referring to 18 and 20 in FIG. 2.
utilizing, in the computer, a cryptographic algorithm to encrypt the plurality of fixed coordinates, thereby forming a processed data; and	Paragraph 19 referring to 22 in FIG. 2.
comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.	Paragraph 19 referring to 24 in FIG. 2.
17. The computer readable medium for performing the method of claim 16 further comprising the step of receiving data representing the location of the item and determining the plurality of fixed coordinates that represent the location of the item prior to receiving the plurality of fixed coordinates.	Paragraphs 13 through 18 referring to 18 and 20 in FIG. 2 and 30 in FIG. 3.
18. The computer readable medium for performing the method of claim 16 further	Paragraph 20 referring to 26 in FIG. 2.

Claim Elements	Support in Specification
comprising the step of storing the processed data in a database.	
19. The computer readable medium for performing the method of claim 16 wherein the step of comparing the processed data to at least a portion of secondary data includes the secondary data comprising data previously stored in a database.	Paragraph 19 referring to 24 in FIG. 2.
20. The computer readable medium for performing the method of claim 16 further comprising the step of matching the processed data to the at least a portion of secondary data that is determined to reflect an identical one of the plurality of fixed coordinates.	Paragraph 19 referring to 24 in FIG. 2.
21. The computer readable medium for performing the method of claim 16 further comprising the step of issuing a signal based upon a user-defined rule.	Paragraph 20 referring to 28 in FIG. 2.
22. The computer readable medium for performing the method of claim 16 wherein the step of determining the plurality of fixed coordinates that represent the location occurs in relation to a grid.	Paragraph 13 referring to 20 in FIG. 2.

Claim Elements	Support in Specification
23. The computer readable medium for performing the method of claim 22 wherein the grid comprises a uniform grid.	Paragraph 13 referring to 20 in FIG. 2.
24. The computer readable medium for performing the method of claim 22 wherein the grid comprises a non-uniform grid.	Paragraph 13 referring to 20 in FIG. 2.
25. The computer readable medium for performing the method of claim 22 wherein the grid is a multi-dimensional grid.	Paragraph 13 referring to 20 in FIG. 2.
26. The computer readable medium for performing the method of claim 22 wherein the grid is based upon a user-defined criterion.	Paragraph 14.
27. The computer readable medium for performing the method of claim 26 wherein the user-defined criterion corresponds with quantity.	Paragraph 14.
28. The computer readable medium for performing the method of claim 26 wherein the user-defined criterion corresponds to time.	Paragraph 14.
29. The computer readable medium for performing the method of claim 16 wherein	Paragraph 14.

Claim Elements	Support in Specification
the step of determining the plurality of fixed coordinates that represent the location includes the step of determining the nearest of the plurality of fixed coordinates.	
30. The computer readable medium for performing the method of claim 16 wherein the step of determining a plurality of fixed coordinates that represent the location includes the step of determining the plurality of fixed coordinates surrounding the location.	Paragraph 14.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-7, 10-13, 16-22, and 25-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller).

2. Claims 14-15 and 29-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller) and further more in view of Denning et al., U.S. Patent No. 7,143,289 (Denning).

3. Claims 8-9 and 23-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller) and further more in view of Clapper, U.S. Publication No. 2003/0108202 (Clapper).

VII. ARGUMENT

A. Arguments directed to the first grounds for rejection: Claims 1-7, 10-13, 16-22, and 25-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller).

1. Independent claims 1 and 16

The Appellants' claimed invention is patentable over the references, because independent claims 1 and 16 contain limitations not taught by the reference. Claims 1 and 16 are reproduced below:

> 1. A computer-implemented method for identification, processing, and comparison of location coordinate data in a confidential and anonymous manner, comprising:
>
> receiving, in a computer, a plurality of fixed coordinates, each of the fixed coordinates representing a location of an item, and the plurality of fixed coordinates being generated by more than one process;
>
> utilizing, in the computer, a cryptographic algorithm to encrypt the plurality of fixed coordinates, thereby forming a processed data; and
>
> comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.

> 16. For a computer-implemented system for identification, processing, and comparison of location coordinate data in a confidential and anonymous manner, and a computer readable medium containing program instructions for execution by a computer for performing the method, comprising:
>
> receiving, in a computer, a plurality of fixed coordinates, each of the fixed coordinates representing a location of an item, and the plurality of fixed coordinates being generated by more than one process;
>
> utilizing, in the computer, a cryptographic algorithm to encrypt the plurality of fixed coordinates, thereby forming a processed data; and
>
> comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.

Specifically, Appellants' invention is designed to use a cryptographic algorithm to identify, disclose and compare multiple sets of coordinates representing the location of a particular item in a secure and confidential manner. These essential features are not taught or suggested by the references.

The Office Action, on the other hand, asserts the following:

> 5. Claims 1-7, 10-13, 16-22, and 25-28 are rejected under 35 U.S.C. 103 (a) as being unpatentable over McDonnell et al (hereinafter referred as McDonnell) US 7,5 12,234 B2 in view of Kubo et al (hereinafter referred as Kubo) US Patent No 7,007168 B2 and further in view of Heller et a1 (herein after referred as Heller) US Patent No 3,793,634
>
> 6. As per claims 1, 16: McDonnell discloses a method/computer readable medium for identification processing and comparison of location coordinate data in a confidential and anonymous manner comprising: receiving, in a computer, a plurality of fixed coordinates, represents a location of an item more than one process (See col. 9 lines 44-47 (i.e., obtain location data)); utilizing ,in the computer, a cryptographic algorithm to process the plurality of fixed coordinates forming a processed data (See col. 6 lines 49-56 and col. 9 lines 56-60 (i.e., encrypt location data)).
>
> McDonnell does not explicitly teach comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.
>
> However Kubo teaches comparing the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a match exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data (See col. 10 lines 18-27, col. 16 lines 39-67 and Figs 18A, Fig 23 steps S 193-195)
>
> Therefore it would have been obvious to one ordinary skill in the art at that time the invention was made to employ the teachings method of Kubo within Denning method in order to provide delivering encrypted information in a communication network using location data.
>
> The combination of McDonnell and Kubo does not explicitly teach the plurality of fixed coordinates being generated by more than one process.
>
> However Heller teaches the plurality of fixed coordinates being generated by more than one process (See col. 8 lines 6-21).
>
> Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to employ the teaching method of Heller within the combination of McDonnell and Kubo in order to provide a system tracking a target by digital techniques (See Heller col. 2 lines 23-25).

Appellants' attorney disagrees, and submits that the combination of McDonnell, Kubo and Heller fails to teach or suggest all the limitations of Appellants' independent claims.

Consider, for example, the portions of McDonnell cited by the Office Action, which are set forth below:

> McDonnell: col. 6, lines 49-56 (actually, lines 46-56)
>
> According to the present invention, there is provided a method of providing location data about a mobile entity, wherein the location data is provided in encrypted form by a location server to a recipient that is one of the mobile entity or a service system usable by the mobile entity, the location data being encrypted such that it can only to be decrypted using a secret available to a decryption entity that is not under the control of the recipient, whereby involvement of the decryption entity is necessary to decrypt the location data.
>
> McDonnell: col. 9, lines 44-47
>
> [I]f the location data is in the form of X, Y coordinates, then the aforesaid components are X and Y coordinate components of the mobile entity's location.
>
> McDonnell: col. 9, lines 56-60
>
> The mobile entity 20 also uses the encrypted location data in package P to request (arrow 75) a second location aware service from a second service system 40A, this time with a higher accuracy limit specified in package Q.sub.2.

Consider also other pertinent portions of McDonnell, which are set forth below:

> McDonnell: col. 8, line 44 – col. 9, line 4
>
> **The mobile entity 20 now supplies (arrow 72) the encrypted location data to a first service system 40A with a request for a first location-aware service**; because of privacy concerns, the user of the mobile entity does not want the service system to know his/her location with a high degree of accuracy and accordingly specifies an accuracy limit as a quality of service parameter in data package Q.sub.1. Package Q.sub.1 also includes the identity of the service system 40A and the period of validity of the request (for example, 10 minutes). Packages P and Q.sub.1 are together digitally signed by mobile entity 20 using the private key of the user (the digital signature S is shown in FIG. 7 as enclosing the packages P and Q.sub.1 within a dotted box). As a result, the encrypted location data and the parameters contained in package Q.sub.1 cannot be altered or substituted without this being detectable.
>
> **Before the service system 40A can act upon the request from mobile entity 20, it must have the location data L decrypted by decryption entity 80**; the decryption entity is such that it will not decrypt the location data unless also provided with package Q.sub.1 protected by digital signature S--this is done so that the decryption entity can reliably limit the accuracy of the location data it

returns to the level specified by the mobile entity. Accordingly, service system 40A next passes the digitally-signed packages P and Q.sub.1 (arrow 73) to the entity 80; for security reasons, the connection between the service system 40A and decryption entity 80 is preferably an encrypted connection with authentication of the participating parties (for example, an SSL or TLS connection).

McDonnell: col. 9, lines 48-51

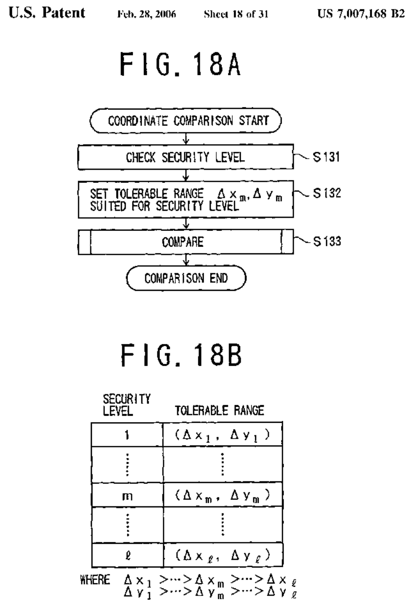
Step 86--**The decrypted location data L.sub.1 with accuracy limited to the level specified by the QoS parameter set by the mobile entity is then returned to the service system 40A over the secure link** (arrow 74 in FIG. 7).

The above portions of McDonnell merely describe how location data for a mobile entity remains encrypted until a decryption entity decrypts it for use by a service system. However, nowhere do the above portions of McDonnell describe a comparison being performed between encrypted coordinate data.

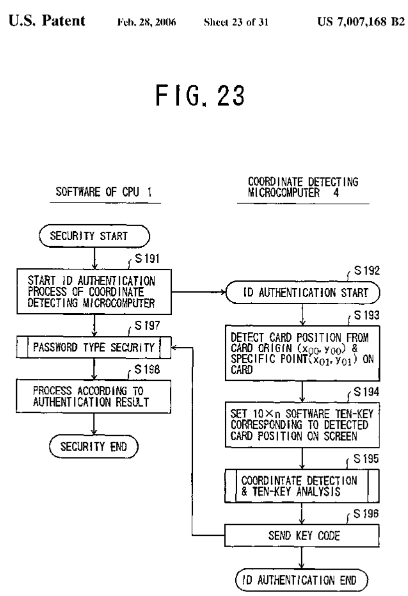
Indeed, the Office Action admits that McDonnell does not explicitly teach "comparing the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data."

Nonetheless, the Office Action asserts that Kubo shows these elements of the independent claims at the following locations:

Kubo: Fig. 18A



Kubo: Fig. 23



Kubo: col. 10, lines 18-27

When starting the computer system shown in FIG. 1, the user ID is input and the ID authentication is made according to the present invention after the BIOS is loaded and before the operating system is loaded. Further, the user ID is

input and the ID authentication is made according to the present invention when starting the application. **Compared to the conventional user ID input which is made by inputting text data which is made up of numbers, alphabets and the like, the present invention inputs the user ID by inputting coordinate values unique to the user. The present invention makes the authentication of the user ID by judging whether or not the input coordinate values or a coordinate value pattern is correct, so as to improve the security of the computer system. The user ID input and the ID authentication will now be described in more detail.**

Kubo: col. 16, lines 39-67

In FIG. 11, a step S91 sets on the screen 11 a 10.times.n software ten-key corresponding to the size of the card. More particularly, the software ten-key is made up of n rows of 10 keys "0" through "9" shown in FIG. 12B which will be described later, and this software ten-key is set at the origin (x0, y0) which is determined by the random number on the screen 11 shown in FIG. 12A.

A step S92 calculates comparison coordinates from the position coordinates of the software ten-key and the registered data. As described above, the origin (x0, y0) is added to the position coordinates of the software ten-key to calculate the coordinates on the screen 11 as the comparison coordinates.

A step S93 displays only the card frame, and the software ten-key itself is not displayed on the screen 11.

A step S101 notifies an input coordinate to the software of the CPU 1 if an input is made on the screen 11.

A step S102 decides whether or not the input exists. If the decision result in the step S102 is YES, a step S103 detects the input coordinate, and a step S104 notifies the input coordinate to the software of the CPU 1.

A step S94 makes a coordinate check and a ten-key analysis. More particularly, a check is made to determine the coordinate of the ten-key corresponding to the input coordinate notified in the step S104, and the coordinate of the ten-key is converted into a corresponding key of the ten-key.

A step S95 carries out a so-called password type security by discriminating whether or not the key converted from the coordinate of the ten-key in the step S104 matches the registered data with respect to the column of the numerical values (0, 1, 2, . . . , 9) of the keys of the ten-key.

The above portions of Kubo merely describe authenticating a user by inputting coordinate values unique to the user to generate a key code comprising a user ID, and then authenticating the user ID by determining whether the coordinate values are correct. This technique of Kubo is considered more secure than the user merely entering a conventional user ID as text data.

For example, Kubo uses a 10 x n software ten-key corresponding to the size of the card, wherein the software ten-key is made up of n rows of 10 keys "0" through "9" as shown in FIG. 12B. The card position coordinates determine which of the keys in the software ten-key are selected and output as the user ID data, which is then compared to the registered user ID data, in order to authenticate the user.

While the card position coordinates in Kubo are used to generate a key code as the user ID, the coordinates are never used in encrypted form. Further, because the card position coordinates in Kubo are never encrypted, they are never compared with other encrypted location information to determine whether a relationship exists. Moreover, the resulting key code in Kubo itself is never encrypted or compared with another (e.g., registered) encrypted version of the key code.

Finally, the Office Action implicitly admits that Heller does not teach or suggest "comparing the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data." Instead, Heller is cited merely for teach "the plurality of fixed coordinates being generated by more than one process," at the following locations:

> <u>Heller: col. 2, lines 23-25</u>
> It is yet another object of the present invention to provide a novel method and radar tracking system wherein angular information including the sensed tracking error of the radar is referenced to a fixed coordinate system and rates are calculated by digital techniques from this information in lieu of using rate gyro data in the tracking loop.
>
> <u>Heller: col. 8, lines 6-21</u>
> In operation, the line-of-sight direction cosine error signals 0, .epsilon..sub.A and - .epsilon..sub.E are transformed, as is hereinafter described, into direction cosine error signals .DELTA.X.sub.S, .DELTA.Y.sub.S and .DELTA.Z.sub.S referenced to the selected fixed coordinate system. These signals transformed into the fixed coordinate system are then utilized, in conjunction with initial line-of-sight direction cosine signals hereinafter described in greater detail in connection with FIG. 4, to generate the target line-of-sight direction cosine signals X.sub.S, Y.sub.S and Z.sub.S relative to the fixed coordinate system. In addition, target line-of-sight direction cosine rate signals X.sub.S, Y.sub.S and Z.sub.S are generated by the tracking error computer 50 and may be utilized,

> together with the line-of-sight direction cosines X.sub.S, Y.sub.S and Z.sub.S, to compute line-of-sight angular rates as is hereinafter described.

Heller merely describes a digital system for positioning and determining the position of a radar beam in a radar system employing a beam steering reflecting element such as a cassegrain antenna. The above portions of Heller merely describe some of the signals used to calculate a reflector position relative to a radar beam position, which are transformed and referenced to a fixed coordinate system.

However, while the coordinates in Heller are used in positioning a radar beam, the coordinates are never used in encrypted form. Further, because the coordinates in Heller are never encrypted, they are never compared with other encrypted location information to determine whether a relationship exists. Moreover, the coordinates in Heller are never encrypted or compared with another encrypted version of the coordinates.

Consequently, the combination of McDonnell, Kubo and Heller does not teach or suggest the limitations of Appellants' independent claims directed to "comparing the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data."

Indeed, neither McDonnell, nor Kubo, nor Heller operate in the same context as Appellants' claims, namely using a cryptographic algorithm to identify, process and compare sets of encrypted coordinates in a secure and confidential manner, and thus cannot be combined in the manner suggested by the Office Action. To properly combine references, the references must be compatible with each other. Instead, McDonnell operates in the context of delivering encrypted location information that can be decrypted only by a specified decryption entity, while Kubo operates in the context of user authentication using input coordinates to generate a key code as the basis for the authentication, and Heller operates a digital antenna positioning system.

Moreover, the Denning and Clapper references do not overcome the deficiencies of the Denning reference. Recall that Denning was cited only against dependent claims 14-15 and 29-30 and only for disclosing a plurality of fixed coordinates represent a location, and Clapper was cited only against dependent claims 8-9 and 23-24 and only for disclosing a uniform and non-uniform grid, in the context of overlaying a residential area.

Thus, Appellants' attorney submits that independent claims 1 and 16 are allowable over McDonnell, Kubo, Heller, Denning and Clapper. Further, dependent claims 2-15 and 17-30 are submitted to be allowable over McDonnell, Kubo, Heller, Denning and Clapper in the same manner, because they are dependent on independent claims 1, and 16, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-15 and 17-30 recite additional novel elements not shown by Denning, Kubo, Heller, Denning and Clapper.

2. Dependent claims 2 and 17

Claims 2 and 17, which are dependent on claims 1 and 16, respectively, recite "receiving data representing the location of the item and determining the plurality of fixed coordinates that represent the location of the item prior to receiving the plurality of fixed coordinates." These claims stand or fall with claims 1 and 16, respectively.

3. Dependent claims 3 and 18

Claims 3 and 18, which are dependent on claims 1 and 16, respectively, recite "storing the processed data in a database." These claims stand or fall with claims 1 and 16, respectively.

4. Dependent claims 4 and 19

Claims 4 and 19, which are dependent on claims 1 and 16, respectively, recite "comparing the processed data to at least a portion of secondary data includes the secondary data comprising data previously stored in a database." These claims stand or fall with claims 1 and 16, respectively.

5. Dependent claims 5 and 20

Claims 5 and 20, which are dependent on claims 1 and 16, respectively, recite "matching the processed data to the at least a portion of secondary data that is determined to reflect an identical one of the plurality of fixed coordinates." These claims stand or fall with claims 1 and 16, respectively.

6. Dependent claims 6 and 21

Claims 6 and 21, which are dependent on claims 1 and 16, respectively, recite "issuing a signal based upon a user-defined rule." These claims stand or fall with claims 1 and 16, respectively.

7. Dependent claims 7 and 22

Claims 7 and 22, which are dependent on claims 1 and 16, respectively, recite "determining the plurality of fixed coordinates that represent the location occurs in relation to a grid." These claims stand or fall with claims 1 and 16, respectively.

10. Dependent claims 10 and 25

Claims 10 and 25, which are dependent on claims 7 and 22, respectively, recite that "the grid is a multi-dimensional grid." These claims stand or fall with claims 7 and 22, respectively.

11. Dependent claims 11 and 26

Claims 11 and 26, which are dependent on claims 7 and 22, respectively, recite that "the grid is based upon a user-defined criterion." These claims stand or fall with claims 7 and 22, respectively.

12. Dependent claims 12 and 27

Claims 12 and 27, which are dependent on claims 11 and 26, respectively, recite that "the user-defined criterion corresponds with quantity." These claims stand or fall with claims 11 and 26, respectively.

13. Dependent claims 13 and 28

Claims 13 and 28, which are dependent on claims 11 and 26, respectively, recite that "the user-defined criterion corresponds to time." These claims stand or fall with claims 11 and 26, respectively.

B. Arguments directed to the second grounds for rejection: Claims 14-15 and 29-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McDonnell et

al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller) and further more in view of Denning et al., U.S. Patent No. 7,143,289 (Denning).

1. Dependent claims 14 and 29

Claims 14 and 29, which are dependent on claims 1 and 16, respectively, recite "determining the plurality of fixed coordinates that represent the location includes the step of determining a nearest of the plurality of fixed coordinates." These claims stand or fall with claims 1 and 16, respectively.

2. Dependent claims 15 and 30

Claims 15 and 30, which are dependent on claims 1 and 16, respectively, recite "determining a plurality of fixed coordinates that represent the location includes the step of determining the plurality of fixed coordinates surrounding the location." These claims stand or fall with claims 1 and 16, respectively.

C. Arguments directed to the third grounds for rejection: Claims 8-9 and 23-24 stand rejected under 35 U.S.C. §103 (a) as being unpatentable over McDonnell et al., U.S. Patent No. 7,512,234 (McDonnell) in view of Kubo et al., U.S. Patent No. 7,007,168 (Kubo) and further in view of Heller et al., U.S. Patent No. 3,793,634 (Heller) and further more in view of Clapper, U.S. Publication No. 2003/0108202 (Clapper).

1. Dependent claims 8 and 23

Claims 8 and 23, which are dependent on claims 7 and 22, respectively, recite that "the grid comprises a uniform grid." These claims stand or fall with claims 7 and 22, respectively.

2. Dependent claims 9 and 24

Claims 9 and 24, which are dependent on claims 7 and 22, respectively, recite that "the grid comprises a non-uniform grid." These claims stand or fall with claims 7 and 22, respectively.

VIII. CONCLUSION

In light of the above arguments, Appellants' attorney respectfully submits that the cited reference does not anticipate nor render obvious the claimed invention. More specifically, Appellants' claims recite novel physical features which patentably distinguish over the cited reference under 35 U.S.C. §§ 102 and 103.

As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

Respectfully submitted,

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CLAIMS APPENDIX

1. (PREVIOUSLY PRESENTED) A computer-implemented method for identification, processing, and comparison of location coordinate data in a confidential and anonymous manner, comprising:

receiving, in a computer, a plurality of fixed coordinates, each of the fixed coordinates representing a location of an item, and the plurality of fixed coordinates being generated by more than one process;

utilizing, in the computer, a cryptographic algorithm to encrypt the plurality of fixed coordinates, thereby forming a processed data; and

comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.

2. (ORIGINAL) The method of claim 1 further comprising the step of receiving data representing the location of the item and determining the plurality of fixed coordinates that represent the location of the item prior to receiving the plurality of fixed coordinates.

3. (ORIGINAL) The method of claim 1 further comprising the step of storing the processed data in a database.

4. (ORIGINAL) The method of claim 1 wherein the step of comparing the processed data to at least a portion of secondary data includes the secondary data comprising data previously stored in a database.

5. (ORIGINAL) The method of claim 1 further comprising the step of matching the processed data to the at least a portion of secondary data that is determined to reflect an identical one of the plurality of fixed coordinates.

6. (ORIGINAL) The method of claim 1 further comprising the step of issuing a signal based upon a user-defined rule.

7. (ORIGINAL) The method of claim 1 wherein the step of determining the plurality of fixed coordinates that represent the location occurs in relation to a grid.

8. (ORIGINAL) The method of claim 7 wherein the grid comprises a uniform grid.

9. (ORIGINAL) The method of claim 7 wherein the grid comprises a non-uniform grid.

10. (ORIGINAL) The method of claim 7 wherein the grid is a multi-dimensional grid.

11. (ORIGINAL) The method of claim 7 wherein the grid is based upon a user-defined criterion.

12. (ORIGINAL) The method of claim 11 wherein the user-defined criterion corresponds with quantity.

13. (ORIGINAL) The method of claim 11 wherein the user-defined criterion corresponds to time.

14. (ORIGINAL) The method of claim 1 wherein the step of determining the plurality of fixed coordinates that represent the location includes the step of determining a nearest of the plurality of fixed coordinates.

15. (ORIGINAL) The method of claim 1 wherein the step of determining a plurality of fixed coordinates that represent the location includes the step of determining the plurality of fixed coordinates surrounding the location.

16. (PREVIOUSLY PRESENTED) For a computer-implemented system for identification, processing, and comparison of location coordinate data in a confidential and anonymous manner, and a computer readable medium containing program instructions for execution by a computer for performing the method, comprising:

receiving, in a computer, a plurality of fixed coordinates, each of the fixed coordinates representing a location of an item, and the plurality of fixed coordinates being generated by more than one process;

utilizing, in the computer, a cryptographic algorithm to encrypt the plurality of fixed coordinates, thereby forming a processed data; and

comparing, in the computer, the encrypted fixed coordinates of the processed data to at least a portion of secondary data that comprises one or more encrypted fixed coordinates to determine whether a relationship exists between the encrypted fixed coordinates of the processed data and the encrypted fixed coordinates of the secondary data.

17. (ORIGINAL) The computer readable medium for performing the method of claim 16 further comprising the step of receiving data representing the location of the item and determining the plurality of fixed coordinates that represent the location of the item prior to receiving the plurality of fixed coordinates.

18. (ORIGINAL) The computer readable medium for performing the method of claim 16 further comprising the step of storing the processed data in a database.

19. (ORIGINAL) The computer readable medium for performing the method of claim 16 wherein the step of comparing the processed data to at least a portion of secondary data includes the secondary data comprising data previously stored in a database.

20. (ORIGINAL) The computer readable medium for performing the method of claim 16 further comprising the step of matching the processed data to the at least a portion of secondary data that is determined to reflect an identical one of the plurality of fixed coordinates.

21. (ORIGINAL) The computer readable medium for performing the method of claim 16 further comprising the step of issuing a signal based upon a user-defined rule.

22. (ORIGINAL) The computer readable medium for performing the method of claim 16 wherein the step of determining the plurality of fixed coordinates that represent the location occurs in relation to a grid.

23. (ORIGINAL) The computer readable medium for performing the method of claim 22 wherein the grid comprises a uniform grid.

24. (ORIGINAL) The computer readable medium for performing the method of claim 22 wherein the grid comprises a non-uniform grid.

25. (ORIGINAL) The computer readable medium for performing the method of claim 22 wherein the grid is a multi-dimensional grid.

26. (ORIGINAL) The computer readable medium for performing the method of claim 22 wherein the grid is based upon a user-defined criterion.

27. (ORIGINAL) The computer readable medium for performing the method of claim 26 wherein the user-defined criterion corresponds with quantity.

28. (ORIGINAL) The computer readable medium for performing the method of claim 26 wherein the user-defined criterion corresponds to time.

29. (ORIGINAL) The computer readable medium for performing the method of claim 16 wherein the step of determining the plurality of fixed coordinates that represent the location includes the step of determining the nearest of the plurality of fixed coordinates.

30. (ORIGINAL) The computer readable medium for performing the method of claim 16 wherein the step of determining a plurality of fixed coordinates that represent the location includes the step of determining the plurality of fixed coordinates surrounding the location.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.